

REMARKS

In an office action dated December 15, 2006, the Examiner objected to the specification; rejected claims 17-19 under 35 U.S.C. §112, first paragraph, as non-enabled; and rejected claims 1-19 under 35 U.S.C. §103(a) as unpatentable over Venkatesan et al. (U.S. Patent 6,928,474).

Specification Objection

The Examiner objected to the use of the term “computer-readable program” in the claims, as not defined in the specification. Applicants do not concede the correctness of this objection. However, in the interests of furthering prosecution herein, applicants have amended claims 9-16 to recite a “computer program”.¹ The phrase “computer program” is used, e.g., at page 15, line 23 of the specification.

Applicants note that the phrase “computer readable program” was present in the claims as filed, yet not objected to by the Examiner until final rejection. Applicants should therefore be allowed to amend the claims at this stage to correct the alleged defect, and they request that the present amendment be entered for purposes of reducing issues on appeal.

Non-Enablement

Applicants respectfully traverse the non-enablement rejections.

Although applicants specification does not employ the exact same words are used in claim 17, the entire thrust of the invention is about making a distinction between the behavior of the

¹ It is applicants' position that a “computer program” is inherently “computer readable”, and therefore the original language is effectively disclosed in the specification, and meets the applicable requirements. However, “computer program” is favored by common usage, and to that extent the claim language, as amended, is possibly less awkward.

“successful” user and that of the “unsuccessful” user, specifically as “success” is defined by the “success element”. Thus, the “Summary of the Invention” is described in the following terms:

With reference to Website improvement, as the main business objective is to sell products or to locate them, it is advantageous for learning about the user’s behavior to monitor the *buyer’s or successful locator’s behavior rather than that of a visitor who stops use of the website without having found or purchased a desired product.*

...

This is mainly achieved by tracking the navigation of each user. Enhancing the path data with which the user finally achieved a particular success; for example, locating or purchasing a product; i.e., enhancing the success user path will supply the web site owner with most of information needed to improve the average user navigation.

...

The present invention is based on exploiting the fact that it is useful to learn from successful users; i.e., customers of a Website or end-user in an application program.

According to the basic aspect of the present invention a method and respective system is disclosed for analyzing user behavior in a man-machine interface of a data processing system, like websites, desktop, or palmtop application programs in which user action is tracked. Said method is characterized by the steps of:

- a) defining at least one success element associated with user navigation within said man-machine interface occurring during a user session,
- b) storing user navigation information, which may be associated with said at least one success element, and reflecting the user behavior within said man-machine interface,
- c) *correlating said at least one success element to said stored user navigation information,*
- d) process a statistical analysis on a plurality of different sets of navigation information collected in respective different user sessions.

...

[emphasis added]

In the above passages, we see that a distinction is being made between the successful and the unsuccessful users, and further that the “stored user navigation information” is correlated to the success element.

The specification further describes collecting user navigation information during a plurality of different user navigation sessions, and storing this information, including the storage

of success events, when the session is finished. This is shown in Fig. 1 as steps 120-170, and described in part at p. 10, lines 12-19. The specification then discloses:

From there, *all similar results* can be accessed and subjected to an inventive analysis procedure in order to get information about *the way in which the successful user has navigated through the site*. In this main analysis step 180 different kinds of success elements can be entered by a person skilled in the art, in order to set the analysis focus according to an individual evaluation goal. Thus, the selection of the success elements used for analysis is modified accordingly. For example, when the website offers clothes, a success element can be added which is represented by pressing a button: “buy this pair of trousers”.

I.e., the results can be filtered to identify the “behavior of users navigating with said web site during a first subset of said plurality of user web sessions” (the successful users), vis-a-vis those not in the first subset (the unsuccessful users).

Finally, the specification offers a concrete, if very simple, example of an analysis of data involving sessions of three users, two of whom are successful (in the first subset) and one of whom is not successful (in the second subset). This example is shown in Fig. 3. The following example is further instructive:

It should be noted that by virtue of the present invention a suited restructuring of the website can be undertaken of which at least one essential creative input is the before-mentioned analysis result. *Thus, for example after careful analyzing the analysis result and comparing the main roads taken by most users to the current website shape, maybe a reason can be found, why unsuccessful user Smith did not enter either of pages 3 or 4, the pages which were visited by the successful users.* Maybe an important link was displayed at the wrong place, or too small, or with a misleading context, etc. Thus, the design of this exemplary page 2 can possibly improved in order to avoid a misleading of potential purchasers. [emphasis added]

Thus the specification clearly discloses that a success element is defined, that a subset of user web sessions is identified based on the success element, and that an analysis of user behavior subset is performed to identify the characteristic behaviors of successful users (user sessions in the subset)

as distinct from those not in the subset. For all the above reasons, claims 17-19 are adequately enabled.

Prior Art

Applicants respectfully traverse the Examiner's prior art rejections

The only reference cited, *Venkatesan*, was also the only reference cited in the previous office action. Although the Examiner now formulates the rejection under 35 U.S.C. §103, applicants responded to both anticipation and obviousness previously. Therefore remarks made in that response are still germane, and are incorporated herein by reference without necessarily repeating verbatim everything said in response to the previous action. Applicants additionally make the following remarks.

As previously explained, applicants' invention is intended to provide improved analysis of computer interfaces, particularly web interfaces, by defining success criteria ("success elements") which are used to identify some subset of users (those who achieve success). The behavior of successful users is of particular interest, and therefore the analysis *separates the behaviors of successful users from the behaviors of those who are not*. Identifying behaviors of successful users, as opposed to unsuccessful users or users in general, provides greater insight into what makes a user successful. For example, by identifying a navigation path branch generally taken by successful users but not by unsuccessful users at the same web page, one may infer that unsuccessful users are erroneously not taking the "successful" users' path, and may modify the web page in question to place greater emphasis on the preferred link or links as opposed to the ones which lead to an unsuccessful conclusion.

A critical element of applicants' invention is therefore that successful navigation behaviors as opposed to unsuccessful behaviors are somehow identified, according to the defined "success element".

Venkatesan discloses a system for collecting data with respect to user navigation of a web site, analyzing the data, and modifying the web site in response to the analysis, but it does not focus specifically on any particular success criteria. Venkatesan's users are simply lumped together in one big pot which does not distinguish the successful from the unsuccessful, and analysis is done to indicate average or typical behaviors of users in that one big pot.

Applicants' representative claim 1 recites:

1. A method for analyzing user behavior in a man-machine interface of a data processing system in which user action is tracked, characterized by the steps of:
 - (a) defining at least one *success element associated with user navigation within said man-machine interface occurring during a user session*,
 - (b) storing user navigation information from a plurality of said user sessions, said user navigation information being associated with said at least one success element and reflecting the user navigation behavior within said man-machine interface occurring during said plurality of said user sessions,
 - (c) *correlating, within said user navigation information, said at least one success element to user navigation behavior within said man-machine interface occurring during said plurality of said user sessions*, and
 - (d) performing a statistical analysis on a plurality of different sets of navigation information collected in respective different user sessions. [emphasis added]

Claim 9 contains recitations analogous to the italicized language above. Claim 17 also recites defining a success element, and in place of steps (c) and (d) recites analyzing the navigation information to identify differences between behaviors of successful users and unsuccessful ones, according to the defined success element. ***Thus all claims recite defining a success element, and somehow distinguishing user navigation behavior of the successful users as defined by the success element.***

In response to the previous office action, applicants pointed out that the Examiner has not clearly identified any particular feature of *Venkatesan* as a “success element”. In response, the Examiner points col, 2, lines 47-47, quoted more fully below:

... The technique can also be useful in collecting E-commerce and/or marketing related information such as the number of hits a web page containing a certain ad is receiving, discovering customer profiles, and the number of completed transactions in a given time period. ...

It is clear that this passage refers to collecting data about the volume of transactions handled by the web site. Even if a “completed transaction” is a “success element”, there is no disclosure that it is *defined as a success element*, or that it is *correlated to specific user navigation behaviors*, i.e. that it is used to identify navigation behaviors associated with the success element as opposed to those behaviors which are not associated with success.

The Examiner further takes official notice of something, although the sentence is incomplete and ungrammatical, and applicants can not understand what it is the Examiner is taking official notice of. If the Examiner is maintaining that something is well known in the art, applicants respectfully request the Examiner to identify with particularity what it is that is known.

In summary, there is no teaching or suggestion in *Venkatesan* of defining a success element, or of any form of analysis which correlates success with user navigation behavior or otherwise makes any distinction between successful and unsuccessful user navigation behavior.

Applicants do not doubt that the analysis performed by *Venkatesan*’s technique provides at least some useful data. But it is data which characterizes the typical behavior of users of the web site. It is not data which in any way *correlates* the defined success element to the behavior of users.

For all of the above reasons, in addition to those explained in response to the previous office action, the claims are not obvious over *Venkatesan*.

In view of the foregoing, applicants submit that the claims are now in condition for allowance and respectfully request reconsideration and allowance of all claims. In addition, the Examiner is encouraged to contact applicants' attorney by telephone if there are outstanding issues left to be resolved to place this case in condition for allowance.

Respectfully submitted,
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